

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of:	Fredric R. BLOOM	Confirmation No.	4921
Serial No.	10/762,492	Art Unit:	1645
Filed:	January 23, 2004	Examiner:	Jana A. Hines
For:	<b>RAPID GROWING MICROORGANISMS FOR BIOTECHNOLOGY APPLICATIONS</b>	Atty. Docket No.	IVGN 347

**DECLARATION OF FREDRIC R. BLOOM UNDER 37 C.F.R. § 1.132**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Fredric R. Bloom, declare and state as follows:

1. I am a co-inventor of the invention embodied in the instant patent application entitled "Rapid Growing Microorganisms for Biotechnology Applications." I received a Ph.D. in Microbiology from New York University in 1974. I have over 25 years experience in microbial genetics and am a co-inventor on six U.S. Patents related to competent cells.
2. I have reviewed the file history of the instant application, including the Office Action sent by Examiner Jana Hines dated December 19, 2008, in which claims 2-14, 77-79 and 108-117 of the present application were rejected on the grounds that they are anticipated by Bloom *et al.* (WO 00/78925).

The Examiner asserts that Bloom *et al.* discloses *E. coli* strain W and BRL3781 at Table 1, page 37 and that based on paragraph [0010], page 4 of the instant application these strains were free of "genetic material of bacteriophage Wphi and/or does not contain the genetic material of bacteriophage Mu and or is resistant to bacteriophage T1 infection." (Office

Action, page 3.) This is not correct. For convenience, paragraph [0010] of the instant application is presented below.

“The invention includes rapid growing bacteria or microorganisms that are free of bacteriophage infection and/or resistant to such infection. For example, the invention includes rapid growing bacteria that do not contain any bacteriophage genetic material, and/or have one or more genetic markers which prevent or inhibit infection with one or more bacteriophage types or have bacteriophage resistant phenotype. The invention also includes rapid growing bacteria or microorganisms that do not contain the genetic material of one or more specified bacteriophage types and/or have been modified or mutated to prevent or inhibit infection with one or more bacteriophage types. In one embodiment, the invention includes E. coli strain W that does not contain the genetic material of bacteriophage Wphi and/or does not contain the genetic material of bacteriophage Mu and/or is resistant to infection with T1 phage”. (Paragraph 10, specification as filed; *emphasis added*).

It was known in the art at the time the instant application was filed that *E. coli* W contained phage. For example, the presence of Mu as a prophage in *E. coli* W was described by Toussaint in 1987 (Toussaint, A., A History of Mu, in: Phage Mu, N. Symonds *et al.*, Eds., Cold Spring Harbor Laboratory Press, 1987, p. 3). The presence of Wphi in *E. coli* W can be found in Glover S.W. and Kerzman G. 1967 *Genet Res.* 9:135-139 and Kerzman G., Glover S.W., Arnovitch J. 1967 *J. Gen Virol.* 1:333-347.

As discussed in paragraph [0010], it is part of the disclosure of the instant application that strains of *E. coli* W in which genetic material of bacteriophage Wphi and Mu has been removed retained rapid growth rates. The disclosure of paragraph [0010] should not be interpreted as teaching that *E. coli* W is free of bacteriophage but rather that strains of *E. coli* W which have been cleared of bacteriophage Wphi and/or Mu are suitable for some embodiments of the claimed invention.

3. As the person signing below, I hereby declare and state that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

June 9, 2009  
Date

/Fredric R. Bloom/  
Signature: Fredric R. Bloom